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10/696,745

10/29/2003

Shinichi Koriyama

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01/12/2006

HOGAN & HARTSON L.L.P.

500 S. GRAND AVENUE

SUITE 1900

LOS ANGELES, CA 90071-2611

EXAMINER

TAKAOKA, DEAN O

ART UNIT

PAPER NUMBER

2817

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/696,745

Applicant(s)

KORIYAMA, SHINICHI

Examiner

Dean O. Takaoka

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-10,13 and 14 is/are pending in the application.
4a) Of the above claim(s) 8 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-3,6,7,9,10,13 and 14 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 15 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/25/05.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings were received on September 15, 2005. These drawings are accepted.

With respect to the drawing objection/s contained in the Office action dated May 27, 2005 as directed to claim 8, the Applicant has amended the drawing/s above however the limitation contained in claim 8 is shown by the Applicant to be directed to a non-elected Species such as shown in the amended drawings of Figs. 1B, 1C or 6B, 6C and not directed to elected Species II drawn to Figs. 2A to 2C (see Applicants election response dated March 15, 2005). Accordingly, claim 8 is now withdrawn by the Examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 3, 6, 7, 9, 10, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchimura et al. (U.S. Patent No. 6,239,669) in view of Koriyama et al. (U.S. Patent No. 6,239,669), prior art submitted in Applicant's IDS dated May 17, 2003 for reasons of record contained in the Office action dated May 27, 2005.

Claim 1:

Claim 1 has been amended (Applicant's amendment dated September 15, 2005) to further comprise the "waveguide extending in a direction from the one surface of the dielectric layer toward the other surface thereof, and being electrically connected to the shield conductor part".

Uchimura et al. in view of Koriyama et al. has met the limitations of the claim above (of record). In addition, Koriyama et al. shows a waveguide (11) orthogonal to the dielectric layer/s (analogous to the waveguide wiring board of Uchimura et al.), the orthogonal waveguide of Koriyama et al. further connected to the shield conductor part (such as shown in Fig. 21C where waveguide 11 connects to shield conductors 71 and also analogous to the shield conductors of Uchimura et al.), thus the rejection is maintained by the Examiner.

Claims 2, 3, 6, 7, 9, 10, 13, and 14 have not been amended, thus the rejection/s is/are maintained by the Examiner.

Response to Arguments

Applicant's arguments, see pages 12 and 13, filed October 28, 2005, with respect to the Notice of Non-Compliant Amendment (September 29, 2005) has been fully considered and is persuasive. The Notice of Non-Compliant Amendment has been withdrawn.

Applicant's arguments filed September 15, 2005 have been fully considered but they are not persuasive.

The Applicant discusses the inventions of Uchimura et al. and Koriyama et al. wherein the last paragraph of Applicant's arguments on page 15, the Applicant submits

"The ancillary Koriyama reference is not seen to remedy the deficiency of Uchimura.

Koriyama is directed to a microstrip transmitting signal to another microstrip via a slot in the ground layer...". Applicant acknowledges that Uchimura "relates not only a coplanar line but a microstrip line, However the present invention relates to a coplanar line." and that concludes "the present invention differs from Koriyama and Uchimura in the arrangement of the surface ground conductor and slot" and "Moreover, Applicant respectfully submits that even if Koriyama was to remedy the deficiency of Uchimura, the above refernmcnes cannot be properly combined to obtain the features of the present invention...Alteration of the above features of Uchimura would change the basic operating principle of Uchimura. Furthermore...Koriyama is directed to a microstrip where the present invention is directed to coplanar lines. Accordingly Koriyama is non-analogous art."

With respect to Uchimura, the limitations of the claim/s do not preclude both coplanar microstrip lines such as taught by Uchimura. In addition, Uchimura teaches the arrangement of the surface ground conductor and slot while Koriyama further teaches a waveguide (11) extending in a direction orthogonal to the dielectric substrate including the microstrip/waveguide, ground plane, and slot (Uchimura). Koriyama further providing a shield conductor surrounding one end of a line conductor where Uchimura shows similar shield conductor/s perpendicular or orthogonal to one end of a line conductor.

With respect to non-combinable references, the Examiner disagrees where the microstrip line of Uchimura is shown in several positions with respect to the plural

dielectric layered substrates (i.e. surface – Fig. 5; extending into another waveguide – Fig. 6 in view of Fig. 7; and as a stripline Fig. 8). Further the microstrip line of Uchimura, being planar is also coplanar with the slot and ground plane (Figs. 16 and 17 of record), thus the microstripline being coplanar. Koriyama merely shows a subducted slot but shows an orthogonal waveguide the dielectric substrate with connecting and surrounding shield conductors (where Uchimura also shows shield conductors). As further exemplary evidence (but not used in the rejection/s) Takenoshita (US '590) shows a most nearly identical device as Uchimura, where an orthogonal waveguide and further comprising surrounding shield conductors (i.e. antenna 52 and shield conductors 16) is shown in Fig. 3 which is analogous to the combination of Uchimura and Koriyama. Still further exemplary evidence is Terashi (US '955) which shows a most nearly identical device as Uchimura (Fig. 2), and Koriyama (Fig. 4), further where the two waveguides are combined (Fig. 3) thus comprising an orthogonal waveguide and surrounding shield conductors; where Uchimura explicitly recites the advantage over the prior art (Fig. 19) where the addition of the laminated waveguide and microstrip provides better transmitting characteristics preventing leakage of electro-magnetic waves. In addition Uchimura provides a wiring board that can be easily produced and applied to wiring boards or semiconductor packages (e.g. Koriyama); further where Takenoshita and Terashi, as well as Uchimura and Koriyama are all of the same Assignee and all comprising most nearly identical components such as the waveguide and slot, thus suggesting the obviousness of the combination (of record), thus it is the position of the

Examiner that the claim/s remain unpatentable over Uchimura et al. in view of Koriyama et al.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Terashi et al. shows waveguides and slot connections.

Takenoshita shows waveguides and slot connections.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dean O. Takaoka whose telephone number is (571) 272-1772. The examiner can normally be reached on 8:30a - 5:00p Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



dot
January 6, 2006

**DEAN TAKAOKA
PRIMARY EXAMINER**